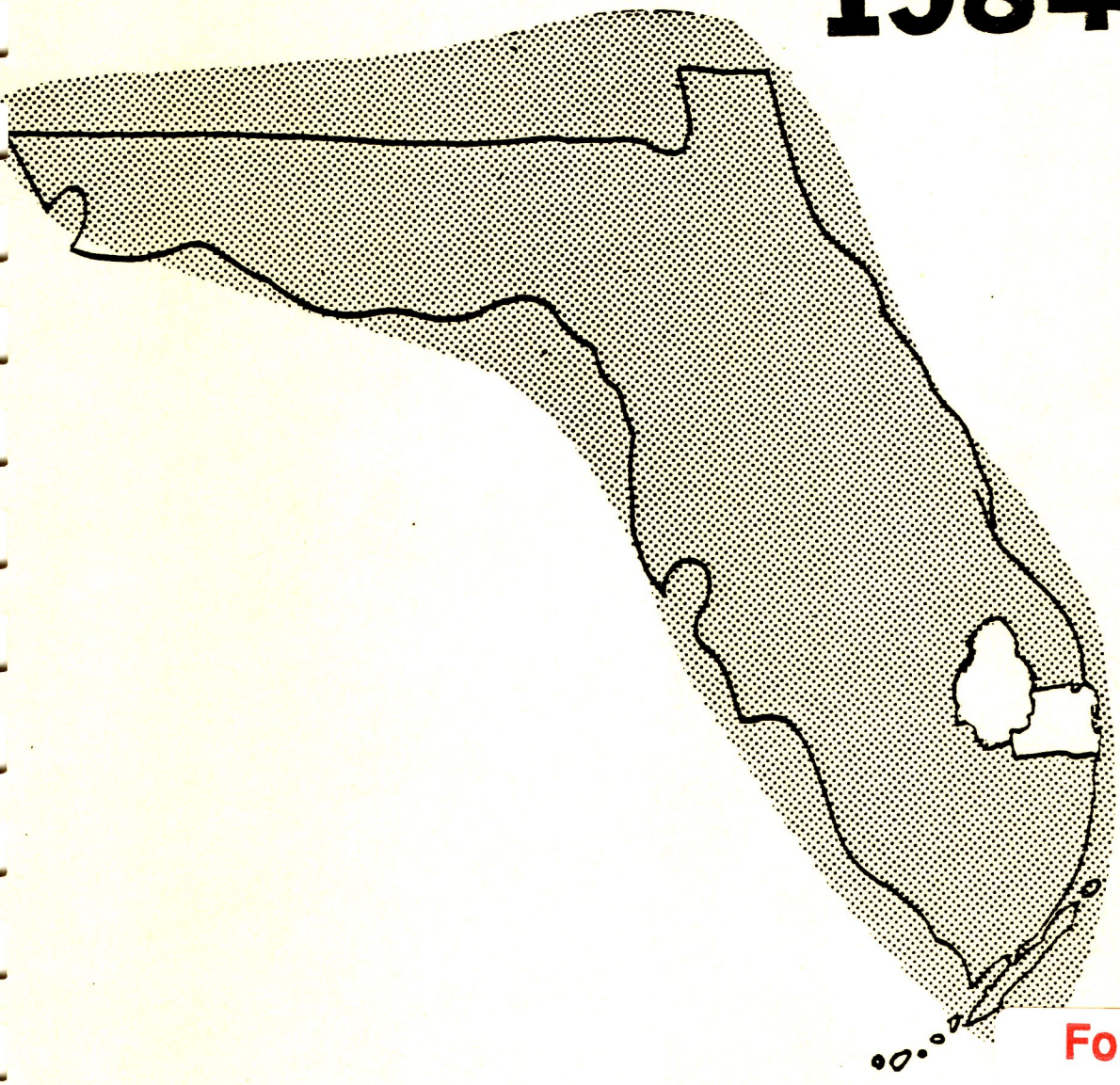
PALM BEACH COUNTY, FLORIDA
DIVISION OF ENVIRONMENTAL
SCIENCE AND ENGINEERING
AIR POLLUTION CONTROL

ANNUAL REPORT 1984



PALM BEACH COUNTY HEALTH DEPARTMENT

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I

INTRODUCTION

Palm Beach County is located along the southeast coast of Florida, and is part of what is generally called the "Florida Gold Coast". The "Gold Coast" consists of four counties: Palm Beach, Broward, Dade and Monroe. Palm Beach County is geographically separated into two regions: one region is a highly urbanized coastal strip, stretching approximately forty-five (45) miles from Tequesta on the north, to Boca Raton on the south: and the other is agricultural, located in the western portion of Palm Beach County (The Glades Area).

The population distribution within the County depicts this same unusual pattern. Virtually all of the population is located in two relatively small areas: the coastal strip adjacent to the Atlantic Ocean and along a narrow band adjacent to Lake Okeechobee. A population table is included in this section (Table 1).

The majority of the population, approximately 90%, is located on the coast from a distance of approximately 15 miles inland from the Atlantic Ocean. Developments through the years have resulted in several municipalities along the coastal strip.

The band adjacent to Lake Okeechobee contains virtually all of the remaining 10% of the County's population. Municipalities which are included in the Glades area are: Belle Glade, Pahokee and South Bay. The economy of this area is an agricultural one, based principally on sugar cane and winter vegetables.

Tourism and related fields continue to be the major economic factors in the urban area. Tourism has increased along with increased population. Other major industries in the area include building construction and related fields, agriculture, aircraft testing facility, electronics, cement and concrete, asphaltic concrete and the service industries.

The complexity of the problems of Air Pollution Control are related to the widespread growth of Palm Beach County. Advances in environmental protection activities, which are being carried out by this program, have been utilized in order to keep abreast of Air Pollution problems. These activities are characteristic of urban areas across the nation.

The review of applications for the state air permits is one of the many activities handled by the Air Pollution Section of the Palm Beach County Health Department. The Florida Department of Environmental Regulation requires both a permit to construct and a permit to operate any air pollution source. The review of permit applications places our local program in a position to prevent the improper construction of a pollution source and to assure that adequate pollution control equipment is utilized and maintained.

Other activities include: consultations with industries and engineers on impending permit action; enforcement action; maintenance of monitoring network; and required compliance schedule and increments of progress surveillance.

Also, our local program investigates and initiates the necessary follow-up action regarding all citizen complaints. As part of the State Air Implementation Plan, this agency is required to conduct source inspections of existing and new sources in Palm Beach County, in order to assure that all sources are in compliance with Air Pollution Regulations.

The air monitoring capabilities of our program continues to be the ultimate means of maintaining air quality standards in Palm Beach County. The Environmental Control Air Monitoring Laboratory located in West Palm Beach is capable of continuously measuring stationary and mobile source related pollutants, i.e., Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), and four meteorological parameters (wind speed, wind direction, temperature, and relative humidity). The data is collected through the use of recorders plus a centrally controlled data acquisition system. Our ozone monitor was removed from the air monitoring laboratory in 1979 and relocated in the Town of Royal Palm Beach in order to comply with the E.P.A. siting criteria. The site is also equipped with a centrally controlled data acquisition system. A second ozone monitor was placed at our 20 Mile Bend Site. Both of the ozone sites are National Air Monitoring Sites (NAMS) and are equipped with continuous meteorological sensing equipment. Our sulfur dioxide (SO_2) site was also relocated in accordance with E.P.A. criteria and placed at Riviera Beach.

In addition to the above, our air quality monitoring network includes ten (10) high volume particulate sites. All analysis pertaining to air pollution is performed by our chemistry laboratory located in Delray Beach. Furthermore, the program continues to monitor for the frequency and intensity of temperature inversions at the Division of Forestry's observation tower located in Loxahatchee, Florida.

All data collected by our air monitoring network is transmitted via telephone lines using a video display system to the Department of Environmental Regulation in Tallahassee. The data is placed in SAROAD (Storage & Retrieval of Aerometric Data) format for transmission.

Public relation activities during the past year by the Air Pollution Section of the Palm Beach County Health Department have consisted of continued steps to inform the general public of the programs and procedures established to maintain our good air quality. These activities include wide distribution of our Annual Report, extending invitations to groups of school and environmental clubs to visit our facilities, and presentations to school and civic groups throughout the County on the topic of "Air Pollution Control in Palm Beach County". In addition, a major aspect of our program's public relations activities is the dissemination, twice daily, of an "Air Quality Index" to the local news media. The index utilizes the daily results of all measured pollutants.

TABLE 1

POPULATION FOR PALM BEACH COUNTY AND MUNICIPALITIES

MUNICIPALITY	Univ. of Fla. Population Estimates 1982	Univ. of Fla. Population Estimates 1983	Univ. of Fla. Population Estimates 1984
Atlantis	1,517	1,530	1,571
Belle Glade	16,928	17,057	17,144
Boca Raton	51,302	52,315	53,353
Boynton Beach	37,532	38,102	39,187
Briny Breezes	381	384	371
Cloud Lake	145	148	152
Delray Beach	38,530	39,470	41,011
Glen Ridge	235	233	231
Golf	114	116	119
Golfview	205	208	211
Greenacres City	16,614	18,357	21,821
Gulfstream	481	498	502
Haverhill	1,257	1,255	1,258
Highland Beach	2,354	2,466	2,847
Hypoluxo	773	838	870
Juno Beach	1,241	1,221	1,634
Jupiter	13,274	14,917	16,425
Jupiter Inlet Colony	400	400	414
Lake Clarke Shores	3,184	3,170	3,182
Lake Park	6,900	6,871	6,831
Lake Worth	27,066	27,189	27,307
Lantana	8,355	8,387	8,395
Manalapan	348	355	361
Mangonia Park	1,377	1,367	1,342
North Palm Beach	12,005	12,123	12,292
Ocean Ridge	1,438	1,470	1,492
Pahokee	6,363	6,473	6,535
Palm Beach	10,391	10,499	10,496

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TABLE 1
POPULATION FOR PALM BEACH COUNTY AND MENICIPALITIES
(continued)

Palm Beach Gardens	17,673	18,108	19,016
Palm Beach Shores	1,243	1,248	1,256
Palm Springs	9,146	9,171	9,281
Riviera Beach	26,634	26,573	27,318
Royal Palm Beach	4,712	5,177	5,938
South Bay	3,702	3,675	3,633
South Palm Beach	1,340	1,372	1,391
Tequesta	3,828	3,810	3,870
West Palm Beach	64,090	63,903	65,731
Total Incorporated	393,070	400,396	414,788
UNINCORPORATED	244,862	251,799	267,850
TOTAL COUNTY	637,940	652,195	682,638

II

METEOROLOGY

Topography is of primary importance whenever the meteorological aspects of a given region are to be evaluated. Palm Beach County is a fairly level region. For the most part, Palm Beach County is between 10 and 20 feet above sea level. All urban development is located along the eastern 15 miles of the coastal strip. Most of the western portions of the County are covered by agricultural lands or everglades.

The agricultural lands are endowed with a rich peatlike "muck" soil. The Atlantic Ocean borders the eastern edge of the County and the Gulf stream flows northward approximately 3 miles off-shore. Seldom does a cold air mass reach this region without being modified due to marine influences and our southern location. Light freezes occur infrequently along the coastal areas of the County and more frequently in the everglades and agricultural areas. The most eastern parts of the County come under the influence of the sea breeze during the day and land breeze during the night. Based on weather data accumulated at Palm Beach International Airport (Table 2), August is the warmest month with a mean of 82.7°F, a maximum mean of 90.6°F, and minimum mean of 74.7°F. From the same data, January is the coldest month with a mean of 65.7°F, a maximum mean of 75.0°F, and a minimum mean of 56.4°F. Rain showers and/or thunderstorms of short duration are frequent during the summer season.

Palm Beach County receives the greatest amount of rainfall during the summer and fall. As indicated in Table 2, the County receives an average 61.5 inches of rain per year.

Palm Beach County can be classified as a semitropical region. The quasi - permanent location of the "Bermuda" high pressure area governs our weather. It causes our prevailing easterly surface winds in addition to supplying the warm moist air necessary to produce the frequent air mass, frontal or nocturnal rain-showers and/or thunderstorms that occur in the County.

The position of the "Bermuda" high pressure area is also conducive to the formation of an atmosphere capable of causing high pollution days. This atmosphere can easily occur if cold air from the north moves underneath the warm moist air brought into the County by the "Bermuda" high. The result is a temperature inversion or increase of temperature with height which traps the pollutants in the lower levels.

Meteorological parameters play a significant role in understanding the over-all air pollution cycle. The motions of the atmosphere are extremely variable and must be thoroughly examined in order to determine the movement and dispersement of pollutants. Both wind direction and wind speed are of primary importance. The surface wind and the wind found in the first few hundred feet of our atmosphere must be studied to determine diffusion and movement of the pollutants.

The wind direction is indicative of the direction of travel of the pollutants. The wind speed determines the time it takes the pollutants to travel to a receptor and is a function of the amount of dilution of pollutant. Light winds, coupled with other factors, contribute to poor air quality episodes. U.S. Weather Service records of Palm Beach International Airport show the prevailing wind directions for the months of February through November are from one of the easterly headings. Mean monthly speeds vary between 7.5 mi/hr in July and 10.9 mi/hr in April (Table 2). The wind direction and speed for 1984 (Table 3) taken at our continuous monitoring site in West Palm Beach shows that a higher percentage of winds were from the east-northeast, east, or east southeast directions and the majority of the wind speeds were in the 4-10 mi/hr category. Table 4 & Table 5 wind direction and speed, for our Royal Palm Beach & 20 Mile Bend ozone sites (NAMS) are included in this section for information purposes.

TABLE 2

PALM BEACH INTERNATIONAL AIRPORT

METEOROLOGICAL MEANS

MONTH	MEAN MAXIMUM TEMP.	MEAN MINIMUM TEMP.	MEAN MONTHLY TEMP.	MEAN MONTHLY PRECIP.(IN)	PREVAILING WIND DIRECTION	MEAN WIND SPEED(mi/hr)
January	75.0	56.4	65.7	2.75	NW	9.8
February	76.1	57.0	66.6	2.58	SE	10.4
March	79.3	61.0	70.2	3.24	SE	10.8
April	82.6	65.5	74.1	3.49	E	10.9
May	85.9	69.4	77.7	5.76	ESE	9.8
June	88.7	72.7	80.7	7.90	ESE	8.1
July	90.5	74.4	82.5	6.19	ESE	7.5
August	90.6	74.7	82.7	6.62	ESE	7.6
September	88.7	74.3	81.5	9.45	ENE	8.6
October	84.8	70.4	77.6	7.55	ENE	10.0
November	79.9	63.8	71.9	3.45	ENE	10.0
December	76.4	58.9	67.7	2.56	NNW	9.9
Yearly	83.2	66.5	74.9	61.54	ESE	9.5

TABLE 3

SITE # 1 - West Palm Beach

WIND DIRECTION AND SPEED (MI/HR) OCCURRENCES

1984

DIRECTION	1-3	4-6	7-10	11-16	17-21	>22	TOTAL	PERCENT
346-15 (N)	130	149	91	13	5	0	388	5.51
16-45 (NNE)	48	106	158	74	2	0	388	5.51
46-75 (ENE)	150	272	288	66	0	0	776	11.02
76-105 (E)	234	559	474	36	0	0	1303	18.49
106-135 (ESE)	274	493	267	15	0	0	1049	14.89
136-165 (SSE)	198	294	228	41	3	1	765	10.86
166-195 (S)	120	103	97	42	5	1	368	5.22
196-225 (SSW)	168	97	56	16	1	0	338	4.80
226-255 (WSW)	98	76	41	29	5	5	254	3.60
256-285 (W)	111	60	42	10	4	8	235	3.34
286-315 (WNW)	156	129	41	3	2	0	331	4.70
316-345 (NNW)	199	120	42	7	2	0	370	5.25
CALM	480						480	6.81
TOTAL	2366	2458	1825	352	29	15	7045	
PERCENT	33.58	34.89	25.91	5.0	.41	.21		100.00

TABLE 4

SITE # 21 - ROYAL PALM BEACH

WIND DIRECTION AND SPEED (MI/HR) OCCURRENCES

1984

DIRECTION	1-3	4-6	7-10	11-16	17-21	> 22	TOTAL	PERCENT
346-15 (N)	112	4	1	0	0	1	118	1.41
16-45 (NNE)	174	3	0	1	1	0	179	2.14
46-75 (ENE)	221	22	1	0	0	0	244	2.91
76-105 (E)	913	145	6	0	0	0	1064	12.69
106-135 (ESE)	547	301	26	0	0	0	874	10.43
136-165 (SSE)	182	61	30	3	0	0	276	3.29
166-195 (S)	188	34	18	5	2	2	249	2.97
196-225 (SSW)	129	36	23	3	0	0	191	2.28
226-255 (WSW)	157	60	16	3	0	0	236	2.81
256-285 (W)	197	101	32	11	0	0	341	4.07
286-315 (WNW)	200	31	9	5	0	0	245	2.92
316-345 (NNW)	329	18	5	0	0	0	352	4.20
CALM	4013						4013	47.88
TOTAL	7362	816	167	31	3	3	8382	
PERCENT	87.82	9.74	1.99	.37	.04	.04		100.00

TABLE 5

SITE #16 - 20 MILE BEND

WIND DIRECTION AND SPEED (MI/HR) OCCURRENCES

1984

DIRECTION	1-3	4-6	7-10	11-16	17-21	> 22	TOTAL	PERCENT
346-15 (N)	72	32	16	4	0	0	124	1.58
16-45 (NNE)	375	97	86	33	0	0	591	7.51
46-75 (ENE)	473	132	140	31	0	0	776	9.86
76-105 (E)	380	271	170	12	0	0	833	10.58
106-135 (ESE)	441	310	192	13	0	0	956	12.14
136-165 (SSE)	392	172	117	13	0	0	694	8.82
166-195 (S)	156	82	35	16	0	0	289	3.67
196-225 (SSW)	269	61	43	12	4	0	389	4.94
226-255 (WSW)	201	74	21	6	4	0	306	3.89
256-285 (W)	113	49	35	22	8	5	232	2.95
286-315 (WNW)	268	118	109	63	16	3	577	7.33
316-345 (NNW)	436	89	44	20	0	0	589	7.48
CALM	1515						1515	19.25
TOTAL	5091	1487	1008	245	32	8	7871	
PERCENT	64.68	18.89	12.81	3.11	.41	.10		100.00

III

TECHNICAL STUDIES

INTRODUCTION

The ambient air monitoring program in Palm Beach County during the year 1984 consisted of the following:

Total Suspended Particulate - 10 Sites

Total Gravimetric

Continuous Gaseous Monitoring - 4 Sites

Site 1

Nitrogen Dioxide

Carbon Monoxide

Site 22

Sulfur Dioxide

Sites 16 & 21

Ozone

Continuous Meteorological Monitoring - 3 Sites

Site 1

Wind Speed

Wind Direction

Temperature

Relative Humidity

Site 16 & 21

Wind Speed

Wind Direction

Microscopic Morphology

All criteria pollutant data collected is reported monthly to the Department of Environmental Regulation and to the Environmental Protection Agency for inclusion in air quality data banks (SAROAD). Gaseous pollutant levels and meteorological conditions from sites #1 and #21 are relayed by data line to the agency's office by a Sumx Corporation data acquisition system. Instantaneous levels of these parameters are available at all times. One hour averages are calculated and recorded.

Locations of the monitoring sites are shown in Figure 1. Table 6 gives site identification numbers, addresses, and parameters measured for all current monitoring sites within the County. Table 7 provides similar information concerning discontinued monitoring sites. Table 8 relates measured air quality within Palm Beach County for the year 1984 to the Federal and State Ambient Air Quality Standards.

PERMANENT MONITORING NETWORK

The original monitoring network for suspended particulate sites, one through eight, was established in 1969 (Site 1A excluded). The Military Trail intercept line, sites nine through twelve, was added in 1972. Six of these twelve stations have been maintained as suspended particulate monitoring sites through the report period.

Periodic automated monitoring of sulfur dioxide, nitrogen dioxide and total oxidants (site 1 through 8) was begun in June of 1971.

Total hydrocarbon monitoring was begun in May of 1972 and discontinued in August of 1981. The automated gaseous and meteorological monitoring equipment were installed in the West Palm Beach monitoring station (Site 1) in November of 1972. Original Technicon Monitoring equipment for nitrogen dioxide, sulfure dioxide and total oxidants was replaced during the third quarter of 1973. Total oxidant monitoring was replaced by ozone monitoring at this time. Site 1 was maintained as the central monitoring station for gaseous pollutants, T.S.P., and meteorological parameters until March 1978, when the ozone monitor was relocated in Royal Palm Beach (Site 21). A second rural ozone monitor was placed on line in January 1980 at the South Florida Water Management Pump Station (Site 16) in accord with the National Air Monitoring Stations (NAMS) network. Relocation of the SO_2 monitoring site to Riviera Beach (Site 22), in July 1980, completed the State and Local Air Monitoring Stations (SLAMS). Network design is summarized in Table 9.

A special study of sulfur dioxide levels and meteorological parameters was conducted in Belle Glade (Site 8), from September of 1972 until May 1978.

Two manual stations for the measurement of nitrogen dioxide were established in November 1973 and maintained until October of 1978 as required by the State Implementation Plan. Manual sulfur dioxide stations have been operated periodically as part of special study projects.

PARTICULATE MONITORING

Methodology: Standard High volume samplers and shelters are located at each of the ten sites. The Belle Glade site, #19, was relocated to Site #23 on November 4, 1983. Samples are collected and handled in accordance with Referenced Method for the Determination of Suspended Particulates in the Atmoshpere (High Volume Method), Federal Register, Vol. 36, No. 84 - Friday, April 30, 1971. Sampling time is twenty-four hours, running from midnight to midnight, for each sampling date. The standard six day schedule as recommended by EPA is followed.

Tabulated results for suspended particulate for the year 1984 are presented in Tables 10 and 11. Figure 2 presents the range of probable logarithmic values for suspended particulate at all ten stations for the years 1983 and 1984. A historical summation for total suspended particulate measurements from 1969 thru 1984 is presented in Table 12.

GASEOUS MONITORING

Maximum ambient air concentrations for gaseous sampling in Palm Beach County for the period 1970-1984 are presented in Table 13.

NITROGEN DIOXIDE (SLAM)

Continuous automatic monitoring for this pollutant is carried on at Site 1.

A MEC Model 1200 $NO-NO_x$ (McMillan Electronics Corporation) Chemiluminescence analyzer was in use from November 15, 1973 until December 27, 1977. At this time it was replaced by Monitor Laboratory Model 8440. Table 14 presents monthly and annual sampling time, arithmetic means and twenty-four hour maximum concentrations. Table 15 includes quarterly and annual, one, eight and twenty-four hour concentration maximums, annual arithmetic means and the frequency distribution of ranges of pollutant levels recorded. Values recorded placed the measured concentrations of this pollutant well below those of the Ambient Air Quality Standards. D.E.R. was unable to make NO_2 accuracy audits during 1984, consequently, accuracy data for this pollutant is unavailable. Precision and completeness for the year are as follows:

Accuracy

Concentration Range	Accuracy Range
0.08 - 0.10 ppm	-73 to 33%
0.15 - 0.10 ppm	-50 to 17%
0.40 - 0.45 ppm	-48 to 14%

Precision: -12 to 15

Completeness: 93%

CARBON MONOXIDE (SLAMS)

This pollutant is monitored continuously at Site 1. A Mine Safety Appliances, Model 200 non-dispersive infrared spectrophotometric automatic analyzer, in service since January 1971, was retired and replaced by a Model 202-S on October 6, 1977. Table 16 presents a monthly record of sampling hours, one and eight hour maximums, and relates concentration maximums to the Ambient Air Quality Standard. There were no recorded values in excess of the one hour or eight hour standards during the reported period.

Table 17 presents quarterly, one and eight hour maximum values and frequency distribution of all recorded pollutant levels. Accuracy, precision and completeness for the year are as follows:

ACCURACY

Concentration Range	Accuracy Range
3 - 8 ppm	-5 to 18
15 - 20 ppm	-4 to 15
40 - 45 ppm	-7 to 9

Precision: -13 to 7

Completeness: 89%

OZONE (NAMS)

This pollutant was monitored continuously at Site 1 from September 6, 1973 thru 1978. The instrumentation was a MEC Model 1100 (McMillan Electronic Corporation) Chemilumenescence analyzer. In 1978 the instrument was modified by the manufacturer to EPA designated reference method status. The monitor was relocated to Royal Palm Beach, Site 21, and placed in service there March 1, 1979.

In January, 1980 a Monitor Labs Model 8410 ozone monitor, went on line at the South Florida Water Management Pump Station (Site 16). This completed the EPA mandated NAMS ozone monitoring network for Palm Beach County. On December 19, 1983 these two monitors were reassigned, the Monitor Lab was transferred to Royal Palm Beach and the McMillan to the South Florida Pump Station. On November 9, 1984 the McMillan analyzer was replaced by a Monitor Labs 8810 UV Photometer analyzer.

The Dasibi Model #1003 PC, which had functioned as the calibration system since December, 1978 was reassigned to transfer calibrator status in 1980 in conjuntion with a Columbia Scientific Photocal 3000 primary standard.

Tables 18 and 20 present a monthly record of hours sampled and one hour maximum recorded at each site. There were no values recorded which exceed the Federal Ambient Air Quality Standard for this pollutant.

One, eight and twenty-four hour maximum and the frequency distribution for all pollutant levels recorded are presented on a quarterly basis in Tables 19 and 21.

Tables 22 and 23 give the design values or expected maximum hourly averages for these sites based on the last three years data using the Wiebull distributions. No credit is given for "seasonal free days" in these calculations. Accuracy precision and completeness for the year are as follows:

ACCURACY

Concentration Range	Accuracy Range
Ø.Ø8 - Ø.1Ø ppm	- 8 to 2
Ø.15 - Ø.1Ø ppm	-12 to 1
Ø.4Ø - Ø.45 ppm	-12 to 1

Precision: -7 to 1Ø

Completeness: 8Ø%

SULFUR DIOXIDE (SLAMS)

Monitoring instrumentation is a Monitor Labs Model 885Ø Fluorescent monitor which replaced the Beckman 9Ø4-A Sulfur Dioxide analyzer, based on coulometric titration.

Site 22, located in Riviera Beach was established in July, 198Ø to monitor sulfur dioxide levels in the coastal region of the County.

Table 24 reports a monthly history of hours sampled, one, three, and twenty-four hour maximums, and the number of violations for each of the related standards. Table 25 presents quarterly and annual maximum values and a frequency distribution of values recorded. Calculation of an arithmetic mean for this pollutant is not feasible because ninety-five percent of the values are below the limit of sensitivity for the instrument. Precision, accuracy and completeness for the year are as follows:

ACCURACY

Concentration Range	Accuracy Range
Ø.Ø3 - Ø.Ø8 ppm	-22 to 15
Ø.15 - Ø.2Ø ppm	- 6 to 8
Ø.4Ø - Ø.45 ppm	- 4 to 8

Precision: -1Ø to 2

Completeness: 98%

TABLE 6

CURRENT MONITORING SITE LOCATIONS

SITE NO.	ADDRESS	UTM ZONE 17	MONITORING CAPABILITY
1	West Palm Beach Water Treatment Plant First Street and Tamarind Avenue West Palm Beach, Florida	2955030N 0593232E	NO_2-1970-84 CO_2-1972-84 Gaseous-1970-81 Meteorology
1A	Palm Beach County Health Department 901 Evernia Street West Palm Beach, Florida	2955030N 0593232E	Susp. Part. 1969-84
3	North Palm Beach Water Treatment Plant 603 Anchorage Drive North Palm Beach, Florida	2965817N 0592780E	Susp. Part. 1979-84
4	Lake Worth Water Treatment Plant 301-303 College Street Lake Worth, Florida	2943537N 0592793E	Susp. Part. 1979-84
5	Delray Beach Water Treatment Plant 202 N.W. 1st Avenue Delray Beach, Florida	2927488N 0592195E	Susp. Part. 1979-84
6	Boca Raton Fire Station #1 1151 N. Federal Highway Boca Raton, Florida	2915768N 05913137E	Susp. Part. 1979-84
10	Southwest Fire Department 1180 S. Military Trail West Palm Beach, Florida	2949018N 0588207E	Susp. Part. 1972-84
15	Division of Forestry Lat. 26° 41'N, Long 80° 16'E Loxahatchee, Florida		Temperature Inversion 1972-84
16	South Florida Water Management Pump Station Twenty Mile Bend State Road 80	2951402N 0562879E	O3 1980-84 Susp. Part. 1976-84 Meteorology

TABLE 6 (cont.)

20	Pahokee Sewage Treatment Plant 1050 McClure Road Pahokee, Florida	2964200N 0532300E	Susp. Part. 1979-84
21	Royal Palm Beach R.V. Area 10999 Okeechobee Boulevard Royal Palm Beach, Florida	2954150N 0578100E	O_3 Meteorology 1979-84
22	Palm Beach County Health Department Warehouse 2030 Avenue "L" Riviera Beach, Florida	296235N 059248E	SO_2 1980-84
23	Belle Glade Health Department 1024 N.W. Avenue "D" Belle Glade, Florida	2953082N 0533160E	Susp. Part. 1984

TABLE 7

DISCONTINUED MONITORING SITE LOCATIONS

SITE NO.	ADDRESS	UTM ZONE 17	MONITORING CAPABILITY
2	Tequesta Water Department 357 Tequesta Drive Tequesta, Florida	2982018N 0589963E	Susp. Part. 1969-77 Gaseous 1970-71
7	Royal Palm Beach Golf Course Royal Palm Beach Boulevard Royal Palm Beach, Florida	2951437N 0578767E	Susp. Part. 1969-78 Gaseous 1970-71
8	Belle Glade Water Treatment Plant 1016 West Canal Street Belle Glade, Florida	2953082N 0533160E	Susp. Part 1969-78 Gaseous 1970-78
9	Grammercy Park Water Treatment Plant Park Avenue Grammercy Park, Florida	2960537N 0587329E	Susp. Part. 1972-77
11	St. Vincent DePaul Seminary S. Military Trail Boynton Beach, Florida	2932890N 0586927E	Susp. Part. 1972-76
13	NO_x SIP Site N8 Florida Atlantic University Boca Raton, Florida	2917000N 0589500E	NO_x 1973-78
14	NO_x SIP Site N9 Palm Beach Mall Palm Beach Lakes Boulevard West Palm Beach, Florida	2956000N 0590700E	NO_x 1973-78
17	Lake Harbor Water Treatment Plant Lake Harbor, Florida	2952230N 0518600E	Susp. Part. 1977
18	Pahokee Health Department 1759 E. Main Street Pahokee, Florida	2967222N 0533760E	Susp. Part. 1977-78
19	Belle Glade Fire Station 22 W. Avenue "A" Belle Glade, Florida	2951420N 0532900E	Susp. Part 1978 83 Discontinued November 4, 1983

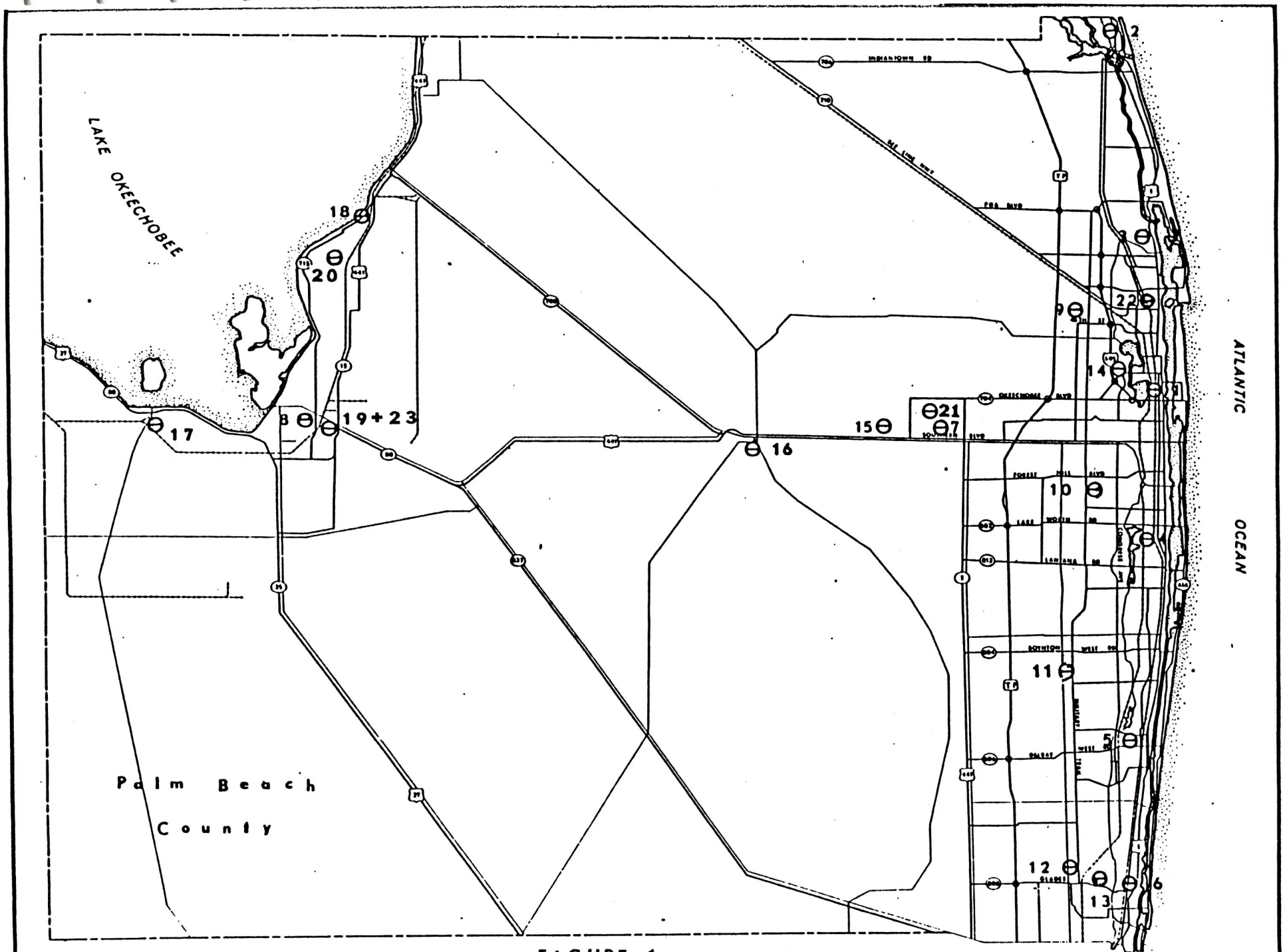

FIGURE 1

Figure 1 Ambient Air Monitoring Network

TABLE 8
AMBIENT AIR QUALITY STANDARDS

POLLUTANT	FEDERAL PRIMARY	FEDERAL SECONDARY	STATE	MEASURED LEVELS PALM BEACH COUNTY PPM see table #			
				Site 1	Site 16	Site 21	Site 22
Suspended Particulates							
Annual Geo. Mean	75 ug/m3	60 ug/m3	60 ug/m3				
Maximum 24 hr. Conc (2)	260 ug/m3	150 ug/m3	150 ug/m3				
Sulfur Oxides							
Annual Arith. Mean	80 ug/m3 (0.03 ppm)		60 ug/m3 (0.02 ppm)				0.0026
Maximum 24 hr. Conc.	365 ug/m3 (0.14 ppm)		260 ug/m3 (0.1 ppm)				0.014
Maximum 3 hr. Conc.(2)		1,300 ug/m3 (0.5 ppm)	1,300 ug/m3 (o.5 ppm)				0.052
Carbon Monoxide							
Maximum 8 hr. Conc.(2)	10 mg/m3 (9 ppm)	Same as Federal Primary	Same as Federal Primary	5.1			
Maximum 1 hr. Conc.	40 mg/m3 (35 ppm)			14.0			
Ozone							
Daily Maximum 1 hr. Conc.(1)	235 ug/m3 (0.12 ppm)	Same as Federal Primary	Same as Federal Primary		0.095	0.090	
Nitrogen Oxides							
Annual Arith. Mean	100 ug/m3 (0.05 ppm)	Same as Federal Primary	Same as Federal Primary	0.015			

1. The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is equal to or less than 1.

2. Concentration limits not to be exceeded more than once per year.

TABLE 9

PALM BEACH COUNTY
NETWORK DESCRIPTION
NAMS, SLAMS AND SPECIAL PURPOSE

Urban Area	Site Address	Network	Saroad Site #	Sampler	Analysis	Pollutant	Mon.Obj.	Spatial Scale	Ope. Schedule	Implem.
Belle Glade	425 W.Canal St.No.	SLAMS	0240-007-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Boca Raton	1151 N. Fed. Hwy.	SLAMS	0280-001-G01	Hi Vol	Gravimetric	TSP	Pop.Exp.	Neighborhood	6 day	Operational
Boca Raton	S. Military Trail	SLAMS	0280-002-G01	Hi Vol	Gravimetric	TSP	Pop.Exp.	Neighborhood	6 day	Operational
Delray Beach	202 NW 1st Ave.	SLAMS	1000-002-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Lake Worth	301 College St.	SLAMS	2220-001-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
N. Palm Beach	603 Anchorage Dr.	SLAMS	3060-001-G01	Hi Vol	Gravimetric	TSP	Pop.Exp.	Neighborhood	6 day	Operational
W.Palm Beach	1108 S.Military Tr.	SLAMS	3420-005-G01	Hi Vol	Gravimetric	TSP	Pop.Exp.	Neighborhood	6 day	Operational
Rural	20 Mile Bend Rd.	NAMS	3120-006-G03	MEC 1100-1	Chemilum	O_3	Max.Conc.	Urban	cont.	Operational
Rural	10999 Okeechobee Blvd.	NAMS	3420-007-G01	Monitor Lab 8410	Chemilum	O_3(EE)	Pop.Exp.	Neighborhood	cont.	Operational
Riviera Beach	2030 Ave. "L"	SLAMS	3840-003-G02	Monitor Lab 8850	Fluorescent	SO_2	Max.Conc.	Neighborhood	cont.	Operational
W. Palm Beach	1st St. & Tamarind Ave.	SLAMS	4760-001-G01	Monitor Lab 8440	Chemilum	NO_2	Max.Conc.	Neighborhood	cont.	Operational
W. Palm Beach	901 Evernia St.	SLAMS	4760-003-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
W. Palm Beach	1st St. & Tamarind Ave.	SLAMS	4760-001-G01	MSA 202-S	Nondispersive Infrared	CO	Max.Conc.	Neighborhood	cont.	Operational
Rural	Twenty Mile Bend	S.P.	3420-006-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational
Pahokee	1050 McClure Rd.	S.P.	3340-001-G01	Hi Vol	Gravimetric	TSP	Max.Conc.	Neighborhood	6 day	Operational

Note: On November 11, 1984 the O_3 monitor at 20 Mile Bend was replaced with a Monitor Lab 8810 U.V. Analyzer.

TABLE 10

SUSPENDED PARTICULATE MATTER, 1984

Site	GEOMETRIC MEAN ug/m3					Geo. Std. Dev.	CONCENTRATION ug/m3				% above or below Annual Standard (60 ug/m3)	No. of Samples Above Daily Standard (150 ug/m3)
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Annual		Arith. Mean	Max.	2nd Max.	Min.		
1A	41.5	33.6	31.1	32.2	34.5	2.10	36.7	71	63	14	-42.50	-0-
3	32.0	29.9	28.4	26.3	29.2	1.40	30.8	54	52	13	-51.33	-0-
4	42.3	39.2	37.2	40.8	39.9	1.43	42.4	81	70	20	-33.50	-0-
5	42.2	35.0	32.0	31.2	34.8	1.41	36.8	65	64	15	-42.00	-0-
6	38.5	34.0	32.0	35.3	34.9	1.42	37.1	67	66	17	-41.83	-0-
10	48.6	40.9	35.3	40.6	41.3	1.55	45.3	119	87	16	-31.17	-0-
12	32.9	29.3	28.3	25.0	28.7	1.48	31.0	65	62	14	-52.17	-0-
16	33.9	28.0	25.6	32.1	29.8	1.61	33.6	125	106	11	-50.33	-0-
19	55.9	46.0	38.9	50.7	47.2	1.46	50.9	110	101	16	-21.33	-0-
20	43.1	38.6	30.3	46.2	39.2	1.47	42.0	77	77	17	-34.67	-0-

TABLE 11

TOTAL SUSPENDED PARTICULATES - 1984
SAMPLING DAYS

SITE NO.	NUMBER OF SAMPLES												
	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
1A	6	4	6	5	5	5	5	5	5	5	5	5	61
3	6	4	6	5	3	5	5	4	3	4	5	5	55
4	4	4	6	5	3	5	3	5	5	5	3	5	53
5	6	4	4	5	5	5	5	5	5	5	5	5	59
6	6	4	5	4	5	5	5	5	5	5	5	5	59
10	6	4	6	5	3	5	5	5	4	5	3	5	56
12	6	4	4	5	5	5	5	5	5	5	5	5	59
16	6	4	6	5	5	5	5	5	5	5	5	5	61
19	6	4	5	5	5	5	5	5	5	5	3	2	55
20	6	4	6	4	4	4	4	5	5	4	5	5	56

FIGURE 2

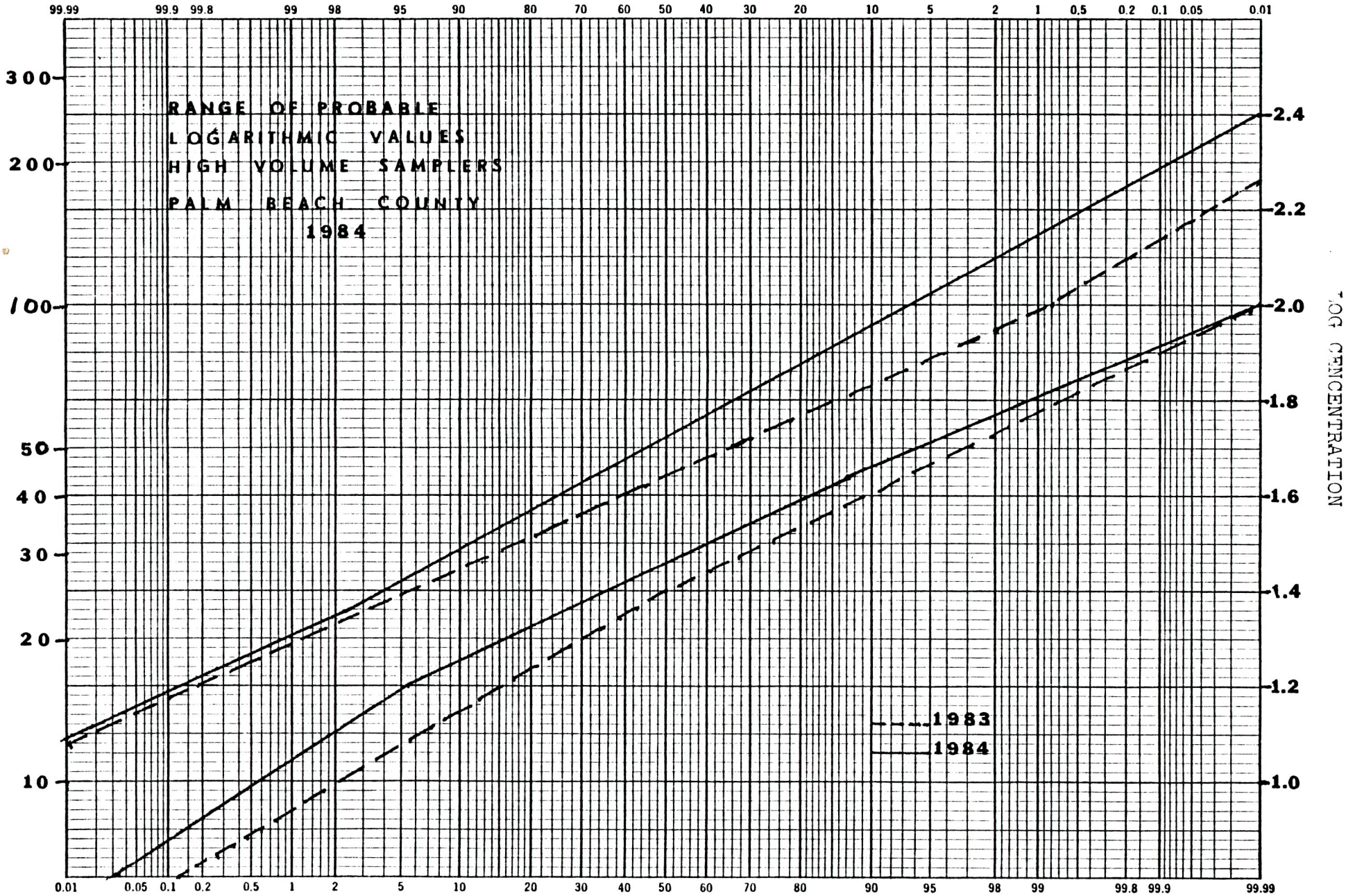

TABLE 12
TOTAL SUSPENDED PARTICULATE ug/m^3
1969-1984

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1/1A	Maximum	109.3	115.7	121.1	133.6	101.9	96.4	81.5	106.2	172	92	88	78	119	72	124	71
	Minimum	9.6	13.9	15.2	15.2	10.8	19.6	20.0	15.8	17	18	18	22	20	11	11	14
	Arith. Mean	48.7	40.9	58.7	49.9	40.5	40.9	44.7	37.4	42.0	41.3	41.0	43.9	49.4	35.3	36.8	36.7
	Geo. Mean	43.9	39.5	53.4	45.9	38.0	38.8	42.4	35.3	38.3	38.2	38.5	42.2	45.8	33.2	32.9	34.5
	Geo.Std.Dev.	1.56	1.42	1.19	1.49	1.49	1.38	1.39	1.41	1.50	1.47	1.44	1.34	1.48	1.45	1.57	2.10
2	Maximum	71.2	74.3	122.3	112.3	85.4	104.0	77.7	63.1	74							
	Minimum	7.3	13.3	10.7	12.2	5.3	19.6	11.9	14.0	12							
	Arith. Mean	26.9	30.4	34.6	33.0	33.6	32.4	36.4	35.5	33.6							
	Geo. Mean	24.6	28.3	30.8	30.3	31.4	30.6	34.1	33.4	30.9							
	Geo.Std.Dev.	1.51	1.45	1.61	1.48	1.49	1.36	1.45	1.44	1.50							
3	Maximum	71.8	82.3	167.5	94.8	133.2	132.7	91.8	67.8	62	65	85	90	115	59	117	54
	Minimum	7.7	1.3	0.4	12.8	16.6	16.1	14.6	10.3	11	12	14	20	17	12	11	13
	Arith. Mean	32.2	31.7	40.6	37.0	38.2	35.8	38.3	31.4	30.4	32.1	37.8	41.5	42.6	28.4	28.4	30.8
	Geo. Mean	29.5	28.4	30.7	33.7	35.3	32.2	34.5	29.1	28.4	30.2	35.3	39.2	39.0	26.4	25.6	29.2
	Geo.Std.Dev.	1.63	1.76	2.93	1.49	1.47	1.54	1.61	1.50	1.45	1.42	1.47	1.41	1.53	1.49	1.56	1.40
4	Maximum	351.9	224.8	95.6	89.8	85.6	196.8	435.3	81.0	84	85	101	90	123	121	130	81
	Minimum	7.3	8.0	10.2	12.9	13.3	18.3	19.6	12.7	14	17	20	9	25	14	13	20
	Arith. Mean	32.9	30.9	37.2	34.3	37.7	45.2	57.1	38.2	41.0	44.6	44.7	47.8	49.0	38.2	38.7	42.4
	Geo. Mean	26.4	28.2	31.7	32.2	35.3	38.8	47.9	35.8	39.1	42.1	42.0	45.0	45.3	35.1	35.0	39.9
	Geo.Std.Dev.	1.78	1.47	1.85	1.49	1.39	1.67	1.64	1.44	1.38	1.41	1.43	1.46	1.48	1.53	1.54	1.43
5	Maximum	164.9	76.7	142.4	108.0	92.9	81.9	83.5	61.1	81	99	102	82	122	76	126	65
	Minimum	13.3	8.3	12.2	15.9	10.9	13.8	22.0	13.8	18	17	19	26	21	16	14	15
	Arith. Mean	40.1	36.2	36.4	38.5	40.0	34.8	42.0	35.8	39.1	37.6	40.4	42.7	46.2	35.4	37.2	36.8
	Geo. Mean	38.8	33.6	32.0	35.4	37.6	32.2	39.5	34.0	37.0	35.9	37.6	40.1	42.5	33.2	34.1	34.8
	Geo.Std.Dev.	1.47	1.49	1.64	1.49	1.46	1.53	1.41	1.40	1.41	1.45	1.47	1.33	1.5	1.43	1.80	1.41

TABLE 12 (cont.)

TOTAL SUSPENDED PARTICULATE ug/m3
1969-1984

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
6	Maximum	83.1	80.1	237.9	275.3	106.5	92.4	114.8	62.8	79	107	124	94	131	70	134	67
	Minimum	9.5	9.6	13.3	17.0	13.6	20.9	22.4	16.4	15	18	19	26	25	15	14	17
	Arith. Mean	36.4	33.5	49.1	44.9	43.1	41.6	45.4	35.6	39.3	42.2	47.3	47.0	48.6	27.8	36.3	37.1
	Geo. Mean	32.9	31.0	41.1	39.9	40.2	38.4	42.7	33.8	37.0	39.3	43.8	44.8	45.7	32.6	33.4	34.9
	Geo.Std.Dev.	1.60	1.48	2.09	1.56	1.46	1.26	1.43	1.38	1.43	1.45	1.48	1.37	1.42	1.47	1.48	1.42
7	Maximum	52.5	71.7	131.5	102.0	65.5	98.3	70.5	55.2	64	36						
	Minimum	7.2	2.1	1.6	7.0	9.1	5.4	11.4	6.2	9	17						
	Arith. Mean	23.6	25.8	30.7	31.8	28.1	25.6	33.0	23.1	24.3							
	Geo. Mean	21.5	23.3	24.4	28.3	26.2	22.3	30.4	21.0	22.5							
	Geo.Std.Dev.	1.57	1.59	2.13	1.37	1.45	1.66	1.52	1.55	1.49							
8	Maximum	175.7	273.9	222.7	173.3	151.0	210.9	199.4	125.2	149	143						
	Minimum	12.7	14.5	12.6	19.8	20.3	22.8	10.7	12.6	17	22						
	Arith. Mean	53.8	54.6	61.4	58.6	59.8	59.8	62.4	61.6	59.0	58.8						
	Geo. Mean	46.0	47.1	53.1	52.3	54.0	54.2	56.7	56.3	54.6	53.1						
	Geo.Std.Dev.	1.76	1.70	1.64	1.60	1.61	1.57	1.56	1.56	1.49	1.57						
9	Maximum				74.50	145.3	81.2	65.3	59.1	33							
	Minimum				13.30	11.7	11.3	16.1	9.6	20							
	Arith. Mean				31.2	33.2	29.9	34.1	28.2								
	Geo. Mean				28.7	30.7	27.0	32.2	26.3								
	Geo.Std.Dev.				1.42	1.45	1.50	1.39	1.46								
10	Maximum				94.30	109.0	113.0	81.7	101.6	98	77	80	87	122	72	122	119
	Minimum				18.30	19.0	21.0	23.4	12.8	19	21	18	23	19	17	16	16
	Arith. Mean				44.4	45.3	43.0	47.2	42.8	41.4	46.0	46.2	51.2	53.1	38.2	42.9	45.3
	Geo. Mean				41.6	42.5.	39.0	45.4	40.5	39.2	43.6	43.3	48.9	48.4	36.2	39.5	41.3
	Geo.Std.Dev.				1.43	1.43	1.54	1.35	1.40	1.40	1.41	1.45	1.33	1.54	1.40	1.50	1.55

TABLE 12 (cont.)

TOTAL SUSPENDED PARTICULATE ug/m3
1969-1984

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
11	Maximum				69.9	77.8	134.3	299.9	60.8								
	Minimum				11.9	11.5	13.5	13.5	10.9								
	Arith.Mean				32.1	30.8	34.4	44.9									
	Geo.Mean				29.2	28.9	29.4	37.7									
	Geo.Std.Dev.				1.51	1.53	1.70	1.67									
12	Maximum				68.1	79.6	200.7	64.7	53.7	66	69	85	107	122	62	116	65
	Minimum				11.2	11.0	12.8	18.2	7.0	14	14	13	14	18	10	12	14
	Arith.Mean				29.6	31.7	34.9	34.2	26.9	29.8	29.0	35.0	38.5	40.8	27.3	30.4	31.0
	Geo.Mean				26.9	29.6	29.2	32.4	25.1	27.9	27.2	31.7	35.8	37.0	25.0	27.2	28.7
	Geo.Std.Dev.				1.54	1.43	1.70	1.39	1.47	1.43	1.43	1.56	1.54	1.55	1.52	1.57	1.48
16	Maximum								130.1	76	136	87	68	96	128	73	125
	Minimum								14.6	12	14	14	19	16	9	9	11
	Arith.Mean								35.0	30.9	31.5	37.3	34.2	43.4	26.5	27.8	33.6
	Geo.Mean								31.0	33.2	28.7	33.8	32.1	38.4	23.5	25.2	29.8
	Geo.Std.Dev.								1.60	1.52	1.50	1.57	1.44	1.66	1.60	1.54	1.61
17	Maximum								69								
	Minimum								10								
	Arith.Mean								34.6								
	Geo.Mean								31.6								
	Geo.Std.Dev.								1.53								
18/20	Maximum								63	76							
	Minimum								9	16							
	Arith.Mean									30.8							
	Geo.Mean									28.8							
	Geo.Std.Dev.									1.44							

TABLE 12 (cont.)

TOTAL SUSPENDED PARTICULATE ug/m^3
1969-1984

Site No.	Parameter	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
19/23	Maximum										121	121	110	166	87	102	110
	Minimum										20	16	31	25	16	23	16
	Arith. Mean										52.9	57.5	58.9	62.7	47.8	45.8	50.9
	Geo. Mean										49.6	53.9	56.5	56.6	45.1	43.1	47.2
	Geo.Std.Dev.										1.45	1.45	1.34	1.57	1.41	1.42	1.46
20	Maximum											122	164	177	85	100	77
	Minimum											21	16	21	12	19	14
	Arith. Mean											50.6	52.0	55.6	41.8	40.5	42.0
	Geo. Mean											46.4	47.9	50.6	38.6	38.1	39.2
	Geo.Std.Dev.											1.52	1.48	1.56	1.52	1.41	1.47

TABLE 13

GASEOUS SAMPLING
MAXIMUM AMBIENT AIR CONCENTRATIONS, PPM
1970 - 1984

Site No.	Sampling Dates	Sulfur Dioxide			Total Oxidants		Ozone	
		1 Hour	3 Hour	24 Hour	1 Hour	8 Hour	1 Hour	8 Hour
1	07/17-07/31/70	0.094	0.038	0.007	0.114	0.073	--	--
	04/12-04/27/71	0.044	0.028	>0.006	>0.188	>0.130	--	--
	07/16-07/30/71	0.035	0.012	0.002	0.032	0.026	--	--
	11/14-12/31/72	0.023	0.021	0.003	>0.187	>0.040	--	--
	01/01-11/14/73	0.042	0.034	0.004	--	--	--	--
	11/14-12/31/73	0.015	0.008	0.001	--	--	--	--
	01/01-11/01/73				0.155	0.063		
	09/06-12/31/73						>0.100	>0.071
	01/01-12/31/74	0.075	0.052	0.023			0.077	0.055
	01/01-12/31/75	0.062	0.025	0.008	--	--	0.104	0.077
	01/01-12/31/76	0.055	0.034	0.021	--	--	0.148	0.122
	01/01-12/31/77	0.019	0.015	0.009	--	--	0.106	0.088
	01/01-12/31/78				--	--	0.075	0.066
	04/01-06/30/78	0.030	0.022	0.008	--	--	--	--
	01/01-10/22/79	0.024	0.017	0.016	--	--	--	--
2	06/16-07/02/70	0.035	0.026	0.010	0.104	0.093	--	--
	05/11-05/25/71	0.191	0.142	0.028	0.010	0.0004	--	--
	08/13-08/27/71	0.033	0.015	0.003	0.016	0.018	--	--
3	07/02-07/17/70	0.196	0.128	0.028	0.176	0.086	--	--
	04/27-05/11/71	>0.500	0.324	0.060	0.111	0.055	--	--
	07/30-08/13/71	0.064	0.035	0.005	0.007	0.001	--	--
	05/18-06/30/72	0.053	0.032	0.006	0.116	0.071	--	--
	09/03-12/31/76	--	--	0.004	--	--	--	--
	01/01-12/31/77	--	--	0.004	--	--	--	--
4	07/31-08/14/70	0.031	0.024	0.010	0.129	0.089	--	--
	03/26-04/12/71	0.044	0.034	0.012	0.110	0.106	--	--
	09/23-10/04/71	0.080	0.035	0.006	0.056	0.048	--	--
	11/10-11/19/71	0.000	0.000	0.000	0.078	0.073	--	--

TABLE 13

GASEOUS SAMPLING
MAXIMUM AMBIENT AIR CONCENTRATIONS, PPM
1970-1984 (continued)

Site No.	Sampling Dates	Sulfur Dioxide			Total Oxidants		Ozone	
		1 Hour	3 Hour	24 Hour	1 Hour	8 Hour	1 Hour	8 Hour
5	09/04-09/18/70	0.069	0.029	0.003	0.092	0.066		
	03/12-03/26/71	0.060	0.028	0.005	0.013	0.086		
	10/19-11/01/71	0.006	0.002	0.0003	0.136	0.101		
6	08/21-09/04/70	0.076	0.048	0.013	0.048	0.037		
	01/27-02/12/71	0.132	0.098	0.017	0.110	0.095		
	12/29-01/12/72	0.068	0.034	0.006	0.000	0.000		
	07/05-08/01/72	0.015	0.012	0.003	0.050	0.027		
7	09/28-10/12/70	0.106	0.048	0.006	0.076	0.068		
	02/26-03/12/71	0.026	0.008	>0.003	0.110	0.093		
	11/19-12/10/71	0.015	0.006	0.001	0.038	0.016		
8	10/12-10/26/70	0.000	0.000	0.000	0.078	0.061		
	02/12-02/26/71	>0.288	0.125	>0.030	0.103	0.076		
	02/10-12/29/71	>0.267	0.217	>0.039	0.012	0.006		
	09/21/72-05/01/73	0.068	0.028	0.007				
	12/01/72-05/18/73	0.176	0.098	0.044				
	12/18-12/31/73	0.153	0.113	0.025				
	01/01-09/27/74	0.065	0.031	0.004				
	07/08-12/31/75	0.075	0.074	0.029				
	01/01-12/31/76	0.085	0.078	0.051				
	01/01-12/31/77	0.033	0.029	0.016				
	01/01-05/19/78	0.047	0.043	0.019				
16	01/03-12/31/80						.098	.081
	01/01-12/31/81						.095	.074
	01/01-12/31/82						.080	.073
	01/01-12/31/83						.087	.071
	01/01-12/31/84						.095	.079
17	09/27-12/31/76			0.003				
	01/01-12/31/77			0.003				

TABLE 13

GASEOUS SAMPLING
MAXIMUM AMBIENT AIR CONCENTRATIONS, PPM
1970-1984 (continued)

Site No.	Sampling Dates	Sulfur Dioxide			Total Oxidants		Ozone	
		1 Hour	3 Hour	24 Hour	1 Hour	8 Hour	1 Hour	8 Hour
21	03/01-12/31/79						.079	.070
	01/01-12/31/80						.110	.080
	01/01-12/31/81						.103	.079
	01/01-12/31/82						.122	.073
	01/01-12/31/83						.092	.073
	01/01-12/31/84						.090	.072
22	07/24-12/31/80	0.016	0.014	0.013				
	01/01-12/31/81	0.034	0.031	0.019				
	01/01-12/31/82	0.067	0.053	0.019				
	01/01-12/31/83	0.035	0.025	0.015				
	01/01-12/31/84	0.062	0.052	0.014				

TABLE 13

MAXIMUM AMBIENT AIR CONCENTRATION, PPM
1970-1984

Site No.	Sampling Dates	Nitrogen Dioxide			Carbon Monoxide		Total Hydrocarbons	
		1 Hour	8 Hour	Ar./Mean	1 Hour	8 Hour	1 Hour	8 Hour
1	07/17-07/31/70	0.097	0.068	0.016				
	04/12-04/27/71	0.147	0.079	0.026				
	07/16-07/30/71	0.067	0.056	0.018	3.6	3.1		
	11/14-12/31/72	0.092	0.079	0.020	7.0	3.7	6.5	3.2
	01/01-11/15/73	0.060	0.047	0.007				
	01/01-12/31/73				8.9	6.3	5.5	3.3
	01/01-12/31/74	0.080	0.052	0.015	10.5	8.8	5.8	4.4
	01/01-12/31/75	0.125	0.083	0.015	8.6	5.0	5.2	3.0
	01/01-12/31/76	0.083	0.054	0.009	10.5	5.2	5.3	3.7
	01/01-12/31/77	0.071	0.044	0.017	11.8	8.5	5.2	3.6
	01/01-12/31/78	0.089	0.070	0.012	8.6	4.5		
	10/18-12/31/78						5.8	3.2
	01/01-11/28/79	0.078	0.056	0.016				
	01/01-11/08/79				7.8	3.1		
	01/01-12/31/79						8.3	2.9
	01/01-12/31/80	0.137	0.088	0.018	9.8	5.7	9.6	6.2
	01/01-12/31/81	0.152	0.107	0.012	13.3	5.8		
	01/01-08/14/81						8.4	3.5
	01/01-12/31/82	0.069	0.053	0.038	21.3	8.1		
	01/01-12/31/83	0.069	0.055	0.010	8.9	6.5		
	01/01-12/31/84	0.152	0.083	0.015	14.0	5.1		
2	06/16-07/02/70	0.044	0.032	0.010				
	05/11-05/25/71	0.054	0.040	0.013	2.2	0.3		
	08/12-08/27/71	0.073	0.060	0.013	0.0	0.0		
3	07/02-07/17/70	0.084	0.060	0.010				
	04/27-05/11/71	0.096	0.066	0.017				
	07/30-08/13/71	0.083	0.069	0.018	3.2	0.9		
	05/18-06/30/72	0.088	0.059	0.010	0.0	0.0	3.2	2.2
	01/01-12/31/76			0.006				
	01/01-12/31/77			0.010				
	01/01-03/31/78			0.014				

TABLE 13

MAXIMUM AMBIENT AIR CONCENTRATION, PPM
1970-1984 (continued)

Site No.	Sampling Dates	Nitrogen Dioxide			Carbon Monoxide		Total Hydrocarbons	
		1 Hour	8 Hour	Ar./Mean	1 Hour	8 Hour	1 Hour	8 Hour
4	07/31-08/14/70	0.097	0.068	0.016				
	03/26-04/12/71	0.118	0.107	0.018	2.1	0.3		
	09/23-10/14/71	0.059	0.041	0.018	0.0	0.0		
	11/10-11/19/71	0.124	0.101	0.020	0.0	0.0		
5	09/04-09/18/70	0.055	0.051	0.013				
	03/12-03/26/71	0.146	0.113	0.018	2.1	0.4		
	10/19-11/01/71	0.117	0.093	0.029				
6	08/21-09/04/70	0.064	0.048	0.015				
	01/27-02/12/71	>0.200	>0.187	0.047	9.6	4.2		
	12/29-01/12/71	0.079	0.069	0.022	2.6	0.4		
	07/05-08/01/72	0.065	0.055	0.011				
7	09/28-10/12/71	0.031	0.018	0.007				
	02/26-03/12/71	0.106	0.081	0.016	0.8	0.1		
	11/09-12/10/71	0.074	0.055	0.19	2.2	2.0		
8	10/12-10/26/70	0.118	0.067	0.017				
	02/12-02/26/71	0.152	0.091	0.022	5.2	3.0		
	12/10-12/29/71	0.076	0.048	0.024	0.0	0.0		
13	11/14-12/31/73			0.003				
	01/01-12/31/74			0.004				
	01/01-12/31/75			0.008				
	01/01-12/31/76			0.005				
	01/01-12/31/77			0.008				
	01/01-12/31/78			0.010				
14	11/14-12/31/73			0.004				
	01/01-12/31/74			0.005				
	01/01-12/31/75			0.012				
	01/01-12/31/76			0.008				
	01/01-12/31/77			0.015				
	01/01-12/31/78			0.015				

TABLE 14

NITROGEN DIOXIDE DATA
SITE NUMBER 1
1984

Month	Hours	Arith. (a) Avg., ppm	Max. 24 Hr. Avg., ppm
J	733	.017	.033
F	688	.016	.032
M	697	.015	.045
A	709	.014	.032
M	730	.010	.017
J	703	.012	.031
J	698	.012	.021
A	537	.016	.027
S	581	.013	.024
O	651	.012	.032
N	711	.017	.030
D	730	.020	.046
ANNUAL	8168	.015	.046

TABLE 15

AMBIENT AIR-NITROGEN DIOXIDE, PPM
SITE NUMBER 1
1984

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.096	.088	.060	.152	.152		
8 Hr. Maximum	.073	.058	.037	.083	.083		
24 Hr. Maximum	.045	.032	.027	.046	.046		
Arith. Mean.	.017	.014	.016	.020	.015		
Concentration Range			Hours			%	Cum. %
< .010	851	1253	743	715	3562	43.61	43.61
.010 - .019	649	534	707	831	2721	33.31	76.92
.020 - .029	281	186	232	285	984	12.05	88.97
.030 - .039	165	86	105	142	498	6.10	95.07
.040 - .049	84	45	24	59	212	2.60	97.67
.050 - .059	40	26	4	19	89	1.09	98.76
.060 - .069	22	8	1	17	48	.59	99.35
.070 - .079	18	2		11	31	.38	99.73
.080 - .089	7	2		5	14	.17	99.90
.090 - .099	1			3	4	.05	99.95
.100 - .109				2	2	.02	99.97
.110 - .119							
.120 - .129				1	1	.01	99.98
.130 - .139				1	1	.01	99.99
.140 - .149							
.150 - .159				1	1	.01	100.00
Total	2118	2142	1816	2092	8168	92.99	
Downtime	66	42	392	116	616	7.01	
Total Time at Site	2184	2184	2208	2208	8784		

TABLE 16

CARBON MONOXIDE DATA
SITE NUMBER 1
1984

Month	Hours	Arith. Mean ppm	1 Hr. Max. ppm	No. of Times 1 Hr. Standard (35 ppm) exceeded	8 Hr. Max. ppm	No. of Times 8 Hr. Standard (9 ppm) exceeded
J	626	1.19	5.8	-0-	3.3	-0-
F	685	1.02	8.2	-0-	5.1	-0-
M	440	.74	2.5	-0-	1.7	-0-
A	710	.80	8.6	-0-	2.9	-0-
M	732	.94	14.0	-0-	3.4	-0-
J	605	.83	4.3	-0-	2.1	-0-
J	731	.81	2.2	-0-	1.5	-0-
A	732	.65	3.3	-0-	1.8	-0-
S	710	.44	7.1	-0-	2.0	-0-
O	736	.42	2.6	-0-	1.9	-0-
N	395	.64	3.5	-0-	1.5	-0-
D	665	.74	8.6	-0-	3.2	-0-
ANNUAL	7767	.77	14.0	-0-	5.1	-0-

TABLE 17

AMBIENT AIR, CARBON MONOXIDE, ppm
SITE NUMBER 1
1984

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	8.2	14.0	7.1	8.6	14.0		
8 Hr. Maximum	5.1	3.4	2.0	3.2	5.1		
24 Hr. Maximum	2.3	1.9	1.3	1.7	2.3		
Mean.	1.19	.94	.81	.74	.77		
Concentration Range			Hours			%	Cum. %
< 2.0	1618	2012	2154	1756	7540	97.00	97.00
2.0 - 2.4	81	12	9	14	116	1.49	98.49
2.5 - 2.9	28	9	5	7	49	.63	99.12
3.0 - 3.4	7	3	3	5	18	.23	99.35
3.5 - 3.9	3	2	1	4	10	.13	99.48
4.0 - 4.4	3	2		3	8	.10	99.58
4.5 - 4.9	3	2		2	7	.09	99.67
5.0 - 5.4	3			1	4	.05	99.72
5.5 - 5.9	4	3		1	8	.10	99.82
6.0 - 6.4	2			2	4	.05	99.87
6.5 - 6.9	1				1	.01	99.88
7.0 - 7.4	1		1		2	.03	99.91
7.5 - 7.9							
8.0 - 8.4	1				1	.015	99.925
8.5 - 8.9		1		1	2	.03	99.955
9.0 - 9.4							
9.5 - 9.9		1			1	.015	99.97
10.0 - 10.4							
10.5 - 10.9							
11.0 - 11.4							
11.5 - 11.9>		2			2	.03	100.00
Total	1755	2049	2173	1796	7773	88.49	
Downtime	429	135	35	412	1011	11.51	
Total Time at Site	2184	2184	2208	2208	8784		

TABLE 18

OZONE DATA
SITE NUMBER 16
1984

Month	Hours	Arith. Mean ppm	1 Hour Maximum ppm	No. of Hours 1 Hr. Florida Std. or Federal Std. (0.12 ppm) Exceeded
J	448	.021	.065	-0-
F	612	.020	.060	-0-
M	716	.028	.075	-0-
A	694	.033	.089	-0-
M	736	.025	.067	-0-
J	691	.022	.095	-0-
J	140	.011	.042	-0-
A	479	.014	.071	-0-
S	695	.022	.074	-0-
O	317	.026	.088	-0-
N	-0-	---	---	---
D	-0-	---	---	---
ANNUAL	5528	.022	.095	-0-

TABLE 19

AMBIENT AIR-OZONE, PPM
SITE NUMBER 16
1984

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.075	.095	.074	.088	.095		
8 Hr. Maximum	.065	.079	.066	.076	.079		
24 Hr. Maximum	.045	.050	.036	.042	.050		
Mean.	.028	.033	.022	.026	.022		
Concentration Range			Hours			%	Cum. %
< .010	371	452	519	104	1446	26.16	26.16
.010 - .019	414	463	295	54	1226	22.18	48.34
.020 - .029	384	406	219	27	1036	18.74	67.08
.030 - .039	302	273	159	35	769	13.91	80.99
.040 - .049	156	232	64	44	496	8.97	89.96
.050 - .059	107	180	39	27	353	6.39	96.35
.060 - .069	38	78	13	12	141	2.55	98.90
.070 - .079	4	27	6	8	45	.81	99.71
.080 - .089		9		6	15	.27	99.98
.090 - .099		1			1	.02	100.00
Total	1776	2121	1314	317	5528	62.93	
Downtime	408	63	894	1891	3256	37.07	
Total Time at Site	2184	2184	2208	2208	8784		

TABLE 20

OZONE DATA
SITE NUMBER 21
1984

Month	Hours	Arith. Mean ppm	1 Hour Maximum ppm	No. of Hours 1 Hr. Florida Std. or Federal Std. (0.12 ppm) Exceeded
J	685	.021	.062	-0-
F	676	.023	.067	-0-
M	719	.024	.062	-0-
A	703	.029	.080	-0-
M	741	.022	.069	-0-
J	713	.021	.090	-0-
J	740	.011	.043	-0-
A	637	.011	.065	-0-
S	702	.015	.065	-0-
O	739	.023	.089	-0-
N	693	.018	.043	-0-
D	677	.017	.057	-0-
ANNUAL	8425	.020	.090	-0-

TABLE 21

AMBIENT AIR-OZONE, PPM
SITE NUMBER 21
1984

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.067	.090	.065	.089	.090		
8 Hr. Maximum	.056	.072	.048	.061	.072		
24 Hr. Maximum	.040	.052	.028	.035	.052		
Mean.	.024	.029	.015	.023	.020		
Concentration Range			Hours			%	Cum. %
< .010	459	582	995	564	2600	30.86	30.86
.010 - .019	422	484	639	478	2023	24.01	54.87
.020 - .029	520	355	336	595	1806	21.44	76.31
.030 - .039	435	272	76	395	1178	13.99	90.30
.040 - .049	170	238	19	54	481	5.71	96.01
.050 - .059	68	160	10	15	253	3.00	99.01
.060 - .069	6	54	4	5	69	.82	99.83
.070 - .079		9		2	11	.13	99.96
.080 - .089		1		1	2	.02	99.98
.090 - .099		2			2	.02	100.00
Total	2080	2157	2079	2109	8425	95.91	
Downtime	104	27	129	99	359	4.09	
Total Time at Site	2184	2184	2208	2208	8784		

TABLE 22

OZONE DESIGN VALUES 1980-1984
SITE NUMBER 16
WIEBULL DISTRIBUTIONS

Year	Number of Excursions ≥ 0.12 ppm	Number of Days Sampled	% Complete	Maximum 1 Hr. Avg. ppm	2nd Max. 1 Hr. Avg. ppm	Annual Design Value ppm	Three Year Design Value ppm
1980	-0-	292	79.78	.098	.083	.097	N.A.
1981	-0-	318	87.12	.095	.089	.095	N.A.
1982	-0-	352	96.44	.080	.078	.084	.095
1983	-0-	298	81.64	.087	.085	.088	.088
1984	-0-	250	68.31	.095	.089	.096	.089

TABLE 23

OZONE DESIGN VALUES 1973-1984
SITE NUMBER 21
WIEBULL DISTRIBUTIONS

Year	Number of Excursions 0.12 ppm	Number of Days Sampled	% Complete	Maximum 1 Hr. Avg. ppm	2nd Max. 1 Hr. Avg. ppm	Annual Design Value ppm	Three Year Design Value ppm
1973	-0-	116	31.78	.111	.104	.130	N.A.
1974	-0-	363	99.45	.077	.074	.078	.106
1975	-0-	331	90.68	.104	.086	.097	.101
1976	3	270	73.97	.148	.142	.154	.123
1977	-0-	323	88.49	.106	.101	.106	.122
1978	-0-	138	37.81	.075	.069	.079	.128
1979	-0-	256	70.14	.082	.076	.081	.092
1980	-0-	299	81.69	.110	.102	.109	.101
1981	-0-	348	95.34	.103	.089	.098	.102
1982	-0-	354	96.99	.122	.080	.106	.106
1983	-0-	332	90.96	.092	.088	.091	.101
1984	-0-	362	98.91	.090	.089	.098	.099

TABLE 24

SULFUR DIOXIDE DATA
SITE NUMBER 22
1984

Month	Hours	Arith. Mean ppm	1 Hr. Max. ppm	3 Hr. Max. ppm	No. of Times 3 Hr. Std. Exceeded (0.5 ppm)	24 Hr. Max. ppm	No. of Times 24 Hr. Std. Exceeded (0.1 ppm)
J	737	.00006	.005	.004	-0-	.0007	-0-
F	686	.00039	.015	.013	-0-	.005	-0-
M	738	.00046	.017	.015	-0-	.006	-0-
A	711	.00026	.021	.017	-0-	.004	-0-
M	734	.00022	.013	.011	-0-	.003	-0-
J	704	.00132	.010	.009	-0-	.006	-0-
J	737	.003	.009	.009	-0-	.005	-0-
A	739	.005	.062	.052	-0-	.010	-0-
S	715	.003	.022	.011	-0-	.006	-0-
O	686	.0076	.017	.014	-0-	.010	-0-
N	710	.0025	.008	.007	-0-	.005	-0-
D	719	.0076	.018	.017	-0-	.014	-0-
ANNUAL	8616	.0026	.062	.052	-0-	.014	-0-

TABLE 25

AMBIENT AIR-SULFUR DIOXIDE, PPM
SITE NUMBER 22
1984

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual		
1 Hr. Maximum	.017	.021	.062	.018	.062		
8 Hr. Maximum	.010	.010	.025	.017	.025		
24 Hr. Maximum	.006	.006	.010	.014	.014		
Mean.	.00046	.00132	.005	.0076	.0026		
Concentration Range			Hours			%	Cum. %
< .010	2151	2138	2166	1767	8222	95.43	95.43
.010 - .014	7	9	15	326	357	4.14	99.57
.015 - .019	3	1	4	22	30	.35	99.92
.020 - .024		1	2		3	.04	99.96
.025 - .029			1		1	.01	99.97
.030 - .034							
.035 - .039							
.040 - .044							
.045 - .049			2		2	.02	99.99
.050 - .054							
.055 - .059							
.060 - .064			1		1	.01	100.00
Total	2161	2149	2191	2115	8616	98.09	
Downtime	23	35	17	93	168	1.91	
Total Time at Site	2184	2184	2208	2208	8784		

IV

AIR QUALITY INDEX

The Environmental Protection Agency (EPA) has developed a uniform standardized daily air quality reporting index, called the Pollutant Standard Index (PSI), locally called the Air Quality Index (AQI), to be used by State and local agencies. The use of this index for reporting air quality was made mandatory on May 10, 1979 in the Federal Register/Vol. 44, No 92/Part 58, Subpart E, Appendix G.

This index is dependent upon measured concentrations of the five pollutants which have been assigned National Ambient Air Quality Standards (NAAQS), Federal Episode Criteria, and Significant Harm levels; i.e., total suspended particulate, carbon monoxide, sulfur dioxide, nitrogen dioxide, and ozone. The index converts air pollution concentrations to a normalized number on a scale of zero to five hundred, with the National Ambient Air Quality Standard for each pollutant being assigned the value of 100. This approach is believed to be easier for the public to understand than a report of actual pollutant concentrations. Index values are calculated for each of the five pollutants. The highest of these is the report value.

Five descriptor words have been choosen to depict daily air quality: "good" (0-50), "moderate" (51-100), "unhealthful" (101-200), "very unhealthful" (201-300), and "hazardous" (301-500). If pollutant concentration warrant, the AQI report is expanded to include identification of the problem pollutant, cautionary statements and generalized health effects.

Adoption of the AQI by many pollution control organizations has reduced the confusion previously encountered due to the existances of many different indices. AQI has several advantages: (1) it is simple and can be easily understood by the public, (2) it can accommodate new pollutants, (3) it is based on a reasonable scientific premise, (4) it relates to National Ambient Air Quality Standards, Federal Episode Criteria, and Significant Harm Levels, and (5) it exhibits day to day variations.

The Palm Beach County Health Department samples for the above pollutants and has utilized the Air Quality Index since April 28, 1976. A typical air quality report for Palm Beach County would be "The Air Quality Index is 31. The ambient air quality is within the good range." Index advisories are issued to local newspapers, televisions and radio stations each morning and afternoon Monday through Friday. Table 26 gives a statistical analysis of the monthly morning and afternoon valus. As noted, TSP or Ozone concentrations accounted for all values in the moderate range.

TABLE 26

AIR QUALITY INDEX
WEST PALM BEACH
1984

A.M. DATA

	Days		A.Q.I.			
Month	Good	Moderate	Maximum	Minimum	Mean.	SD.
Jan.	21	-0-	42	16	24	6
Feb.	21	-0-	35	14	26	6
March	20	2	75	19	33	14
April	21	-0-	49	18	36	9
May	21	1	51	15	27	15
June	20	1	52	13	26	13
July	18	3	75	13	29	18
Aug.	23	-0-	48	12	26	11
Sept.	19	-0-	35	10	21	8
Oct.	23	-0-	36	8	26	6
Nov.	19	-0-	30	16	23	5
Dec.	19	-0-	34	13	23	6
Year	245	7	75	8	27	11

TABLE 26 (cont.)

AIR QUALITY INDEX
WEST PALM BEACH
1984

P.M. DATA

	Days		A.Q.I.			
Month	Good	Moderate	Maximum	Minimum	Mean.	SD.
Jan.	20	1	53	20	30	8
Feb.	20	1	51	21	32	7
March	20	2	66	21	34	12
April	19	2	55	21	38	12
May	20	2	51	17	27	17
June	19	2	75	13	31	15
July	18	3	75	15	32	16
Aug.	23	-0-	48	16	30	10
Sept.	19	-0-	35	13	24	6
Oct.	22	1	54	13	29	9
Nov.	19	-0-	35	16	26	6
Dec.	19	-0-	39	16	27	7
Year	238	14	75	13	31	11

Of the values in the Moderate category, T.S.P. values were responsible on five days for both morning and afternoon A.Q.I.'s. All other in the Moderate range were related to Ozone concentrations. No A.Q.I. values above the Moderate zone were reported.

V

EMISSION INVENTORY

INTRODUCTION

Air pollution evolved as an undesired by-product of the technological advancement of our modern society. On the other hand, this modern society also developed technological methods to prevent and control these atmospheric emissions of air pollutants.

Defining air pollution problem areas by determining the actual sources and components of air pollution is a prime step towards abating air pollution, and subsequently attaining and maintaining national ambient air quality standards (NAAQS). The emission inventory accomplishes this crucial step by addressing the sources, types and quantities of air pollution emissions.

A comprehensive emission inventory is an essential tool for any Air Pollution regulatory agency. The inventory provides information for the design of an air sampling and analysis program, identifies the relative contribution of the various pollution sources, offers data for the development of control strategies, and makes this information available for our regional planning authorities.

A number of factors used in compiling the emission inventory, such as reported fuel usage figures, fuel composition, process information and especially emission factors, are somewhat limited in preciseness due to the state-of-the-art knowledge available.

Never-the-less, the emission inventory, by nature of its magnitude, still yields results with adequate accuracy for the purpose and intent of our county air pollution program.

The emission inventory presented in this report represents calculated emissions from major point sources and generalized acceptable estimates of emissions from area sources (Table 27 and 28, respectively).

MAJOR POINT SOURCES

Palm Beach County has 24 major air pollution sources which emit a significant emission tonage of one or more types of air pollutants. Table 27 lists these sources by name and details air emissions by pollutant type in tons per year for 1984. A constantly unpredictable economy has caused a reduction in emission tonage for certain sources due to reduced activity, whereas other sources have actually increased their activity, hence increased their emission tonage above prior years. Data used to compile and quantify the emission levels for each source was gathered using specific data procurement techniques, such as annual operating reports, process material balances, engineering appraisals, and special questionaires.

AREA SOURCES

Palm Beach County has many sources which emit small quantities of air pollutants, and collectively their impact is significant to our atmosphere.

Therefore, these sources must be accounted for in the emission inventory. Table 28 lists major area source categories and details respective air emissions by types in tons per year for 1984. The object of area source calculations is to obtain an accurate estimate of this collective contribution on total emissions. Such an estimate may never be exact due to the difficulties of determining the emissions from every source too small and/or too numerous to be surveyed individually. Ultimately, however, this area source estimate becomes more valid as it is applied to a large number of sources since prescribed techniques were used in conjunction with the activity levels associated with each source category.

References for emission factors utilized are:

(1) Compilation of Air Pollution Emission Factors, AP-42, Supplements 1-13, Third Edition, August 1982, published by the U.S. Environmental Protection Agency, Office of Air and Waste Management, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

(2) Guidelines for Air Quality Maintenance Planning and Analysis, Volume 7: Projecting County Emissions, EPA-450/4-74-008, Second Edition, January 1975, U.S. Environmental Protection Agency, Office of Air and Waste Management,

Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

(3) National Emissions Data System (NEDS) Source Classification Code and Emission Factor Listing, January 1979, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Monitoring and Data Analysis Division, National Air Data Branch, Research Triangle Park, North Carolina, 27711.

(4) Procedures for the Preparation of Emission Inventories for Volatile Organic Compounds, Volume I, EPA-450/2-77-028, December 1977, U.S. Environmental Protection Agency, Office of Air and Water Management, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

(5) Mobile Source Emission Factors (For Low-Altitude Areas Only), EPA-400/9-78-006, March 1978, U.S. Environmental Protection Agency, Office of Air and Waste Management, Office of Transporatation and Land Use Policy, Washington, D.C. 20460.

(6) Revisions to the State Implementation Plan (SIP) for Palm Beach County Florida, April 1983, Metropolitan Planning Organization of Palm Beach County.

(7) Procedures for Emission Inventory Preparation, Volumes I-IV, EPA-450/4-81-026A, September 1981, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

TABLE 27

1984 SUMMARY
AIR POLLUTION EMISSIONS
PALM BEACH COUNTY, FLORIDA
TONS/YEAR
POINT SOURCES

A.P.I.S. No 50-50	Source Name	Particulates	SO_2	SO_3	CO	CH_4	NO_2	VOC	TOTAL
0005	Okeelanta Corp.	633	638.2	.7	583.5	221.6	357.4	361.4	2795.8
0011	Florida Asphalt	.5	11.5	.2	.8		3.2		16.2
0015	Boca Raton Hotel	1.8	55.9	.7	1.0	.1	10.2	4.4	74.1
0016	Atlantic Sugar	335.2	300.6	.5	265.4	100.6	171.7	163.9	1337.9
0018	Q.O. Chemicals	1.2	24.9	.4	2.9	.03	11.7	.1	41.2
0019	Osceola Farms	380.6	368.6	.8	310.9	118	194.6	192.3	1565.8
0021	Pratt & Whitney	70.7	79.6	.01	271	8.2	136.9	357.5	923.9
0026	Sugar Cane Growers Coop.	445.8	1122.7	.2	522.6	198.5	318.5	323.8	2932.1
0042	Florida Power&Light	193.8	1743.1	32	448.1	6.2	6139	22.3	8584.5
0045	Lake Worth Utilities	16.9	15.1	.04	130.9	17.9	683.3	23.3	887.4
0046	Eagle Cement	1.1							1.1
0050	Florida Sugar Refinery	7	97.9	1.2	1.3	.3	14.3	.1	122.1
0061	U.S. Sugar Corp.-Bryant	350.7	447.3	.7	434.9	165.2	262.9	269.5	1931.2
0073	Talisman Sugar Corp.	240.9	353.7	.7	296.9	112.7	187.2	183.6	1375.7
0081	A.G. Holley Hospital	.6	6.3	.1	.3	.1	1.3	.1	8.8
0084	Eastern Cement	14.6							14.6
0087	Ranger Construction	16.5	100.4	1.3	2.1	.3	19.2	.1	139.9
0088	City of Pahokee	9.8	3.8	---	14.1	4.2	4.3	4.2	40.4
0155	F.H. Foster Oil Corp							15.0	15.0
0158	Cooper Oil Co.							20	20
0161	Howell Oil							19.5	19.5
0162	Charles Brown Oil							39.8	39.8
0163	Berner Oil Co.							14.5	14.5
0186	Parkway Asphalt	.7	3.1	.04	.05	.01	.5	---	4.4
POINT SOURCE TOTALS		2721.4	5372.7	39.6	3286.8	953.9	8516.2	2015.4	22,906

TABLE 28

1984 SUMMARY
AIR POLLUTION EMISSIONS
PALM BEACH COUNTY, FLORIDA
TON/YEAR
AREA SOURCES

	Particulates	SO_2	SO_3	CO	CH_4	NO_2	VOC	Aldehydes	Organic Acids	Totals
MOBILE SOURCES:										
Highway/Off Highway	1966.8	1206.8		169071.5	1706.8	13636.3	15949.6	57.6	54.5	203649.9
Aircraft	15.1	57.9		5416	16.8	462.2	408.8			6376
Vessels	17.5	172.6		3.9	.4	32.5	3.3			230.2
Railroads	40.9	93.2		212.7	3.3	605.2	150.5	9.0	11.5	1126.3
FUEL COMBUSTION:										
Miscellaneous	37.5	665.8	9.4	97	22.6	403.1	17.2			1252.6
MINERAL PRODUCTS:										
Concrete Batching	70.4									70.4
SOLID WASTE DISPOSAL:										
Incineration	11	3.1		12	2.4	12.6	2.7			43.8
Open Burning	248.8			2049.2	133.5		217.8			2649.3
SUGAR CANE FIELDS:										
Burning	6885.9			66399.8	4984.1		8131.9			86401.7
VOLATILE ORGANIC EMISSIONS:										
Storage & Marketing of Petrol. Prod.							1785			1785.0
Industrial Processes							146.4			146.4
Industrial Surface Coating							220.4			220.4
Non Industrial Surface Coating							2218.5			2218.5
Other Solvent Use							3951.9			3951.9
Area Source Totals	9293.9	2199.4	9.4	243262.1	6869.9	15151.9	33204	66.6	66	310122.4
Point Source Totals	2721.4	5372.7	39.6	3286.8	953.9	8516.2	2015.4	0	0	22906.0
GRAND TOTALS	12015.3	7572.1	49.0	246548.9	7823.8	23668.1	35219.4	66.6	66	333028.4